



Figure 2-25 Thin section image from the Austin Chalk (4,693 feet core depth) in the Louisiana Green Fuels Stratigraphic Test Well (La SN975841) (magnification 50x). This thin section image illustrates the fine grained, poorly sorted character that imparts exceedingly low matrix permeability to the Austin Chalk. The XRD measurements for this sample indicate that it is dominated by clay (49.7 weight %) with elevated quartz (31.2 weight %). Quartz is present as detrital silt suspended in a clay matrix. Visible intergranular porosity is absent, and measured permeability is 0.0000460 mD (using the pulse decay technique on crushed samples). The exceedingly low measured permeability for the Austin Chalk is consistent with the fine grained, poorly sorted character observed in thin section.